Goals

- Define usability requirements and how they fit into development
- Understand the research needed for developing usability requirements
- Understand general usability criteria and the relationship to requirements
- Define the components of a successful requirement statement
- Write a set of usability requirements for the workshop scenario
Activity Scenario: Bank Website

- **Company**: eBank, an Internet bank offering checking, savings, and money market accounts.
- **Project**: eBank’s website, which includes both general information for prospective customers and banking services for current customers.
- **Customers**: Internet users who are comfortable with technology and the security of online banking and who want the convenience an online bank offers.
- **Sample User Goals**: Learn about account options, start an account, and withdraw and deposit money to accounts.
Activity: Brainstorm General Usability Requirements

- Suggest some high-level usability requirements for the scenario
What requirements are in general

- Provide a unifying context for a project that defines expectations for the end product
- Are focused, measurable, and testable
- Provide knowledge communicated to the entire project team throughout the project life cycle
- Often address only functional specifications: *Does the product work?*
What usability requirements are specifically

- **What they are**: The expected and desired user reaction to a system
  - Define how well a product should work for the intended users
  - Define target user satisfaction goals

- **What they aren’t**: Functional requirements, use cases (strictly speaking), marketing’s product “mission” statements, nebulous user wish lists

- *Does the product work well for the intended users?*
When to determine requirements
Why develop usability requirements?

- Provide a common language to focus on user needs throughout the development life cycle
- Include usability into a product foundation rather than add it as an afterthought or fix
- Test design and development assumptions
- Support usability testing
- Serve as a rallying cry for user satisfaction
Source information for usability requirements: Analysis deliverables

Must-have usability requirements

- User analysis
- Task analysis
- Work environment
- Profession description
- Personal productivity goals

User

Determines how truly successful your product is

Business

Pays you

- Market needs
- Industry analysis
- Technology changes
- Budget
- Company productivity goals
- Company growth strategy

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Usability Requirements - 9

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General usability criteria to consider

- **Learnability**: How quickly do users come up to speed on the product?
- **Efficiency**: How easy is the product to use and be productive?
- **Memorability**: Do users remember how to use the product between uses?
- **Error tolerance**: Do users make few errors? Are errors recoverable?
- **Relevance**: Does the product meet users real needs?
- **Attitude/satisfaction**: Do users enjoy using the product?
- **Accessibility**: Does the product support the usage needs of all potential users including those with special physical requirements?
Activity: Selecting and Ranking Usability Criteria

Select and rank the top three criteria for each user group:

- Prospective Customers?
- New Customers?
- Existing Customers?
How usability requirements are constructed

- Determine what usability criteria to measure and the priority for each.
- Determine how the criteria be measured. Create **tangible** measurements of intangible user satisfaction statements.
- Set a realistic percentage of users that must achieve the goals. (100% of users will almost never accomplish 100% of all usability goals.)
- Define the conditions that must exist for the product to successfully fulfill the requirements.
What are the components of a usability requirement

- **What task should the user accomplish**: Clearly define the specific, finite task that a user should perform and the goal to be achieved.
- **Who will accomplish the task**: Define which user type (novice? expert?) the requirement addresses.
- **What conditions will the task be performed under**: Amount of training, work environment, computer experience, etc.
- **How well should the task be performed**: A concrete measure of success as a percentage of the right users under the right conditions.
General tips for writing usability requirements

- Convert qualitative wants and needs to quantifiable goals
  - Absolute: A concrete measure of success
  - Relative: Compared to another criteria such as a previous release
- Write them in terms of user tasks
- Prioritize needs of different user groups
- Again, be realistic – success is never 100% of users
- Test the requirements
What marketing asked for...

“The company website and online store must be easy to use, help users find the right information quickly, and help them purchase products efficiently.”
Breaking it down: “easy to use”

Efficient

- 90% of intermediate and experienced users and 80% of novice users are able to locate a specific item of information within three clicks.
- Users are able to move to any parent level page and to return to the home page with one click from any page in the website.
- Users never have to click more than three levels to find complete information for 99% of all information categories covered.
- Product ordering information should be accessible in one click from any page in the website.
Breaking it down: “easy to use”

- **Error tolerant**
  - No more than 10% of all users follow “false leads” when searching for any single item of information.
  - Completed information for orders are retained if the user modifies or needs to correct an order in the same browser session.

- **Memorable**
  - 85% of experienced Web users are able to locate previously viewed information within 15 seconds after performing other tasks for no more than 10 minutes.
Breaking it down: “find the right information quickly”

- **Easy to learn**
  - 85% of all users are able to accurately navigate site to accomplish discrete tasks within 30 seconds of use.
  - When placing an order, 98% of users complete an order fully online rather than seeking an alternative ordering route (for example, telephone ordering).

- **Intuitive**
  - 90% of intermediate and experienced Web users and 75% of novice Web users can access the correct information using a site index.
  - 95% of all users should be able to find answers online to order questions while placing the order.
Breaking it down: “find the right information quickly”

- Efficient
  - Information can be accessed within 3 clicks from any page in the site.

- Accessible
  - Tools for sight-impaired users accurately communicate located information, including product descriptions for product images.
Breaking it down: "purchase products efficiently"

Efficient
- 95% of all users complete purchases 50% faster for their experience level than on our previous website.
- Expert users can complete purchases using no more than five screens.

Satisfying user experience
- The number of good features users recall after using the product to perform a defined set of tasks exceeds the number of bad features recalled.
- 90% of all users would shop from the site again.
Activity: Write Usability Requirements for eBank

- Divide into groups and select the user type and task that the requirements address
- Identify the usage conditions that are relevant to the user and task
- Select a single usability criterion to focus on
- Write at least three requirement statements
- Share with the group
Activity: Write Usability Requirements for eBank (cont’d)

1. 

2. 

3. 
Questions?

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http://karenlynn.home.mindspring.com/ProDev.html
References

- J. Jubner. http://www.deltamethod.net/hb_WR5_UsabilityReq.htm